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Due to the complexity of the references, when responding to the art rejections, Applicant will only consider those parts pointed to by the Examiner. The prior arguments are incorporated by reference and supplemented as follows.

Independent claims 5 and 12-15

Neither Hamabc nor Flammer, taken separately or in combination, teaches selecting the first and second power levels in view of their respective probabilities of failure such as to minimise the average power consumption.

The Examiner appears to fail to understand the claim limitations. Accordingly, some examples have been worked out — per the following table — to try to better explain to the Examiner what the words of the claims would mean to one of ordinary skill in the art.

Exam- ple #	First & Second Power Levels	Failure Probability at that Level	No. of frames that need to be transmitted at that power	Total power expended at this level	Total Power Per Message, including both levels	Total No. of Frames transmitted per message	Average Power per Successful Frame	Average Power per Frame
1	4	65%	160	640	2720	264	17	10.3
	20	Negligible	104	2080				
2	6	40%	160	960	2240	224	14	10
	20	Negligible	64	1280				
3	8	25%	160	1280	2080	200	13	10.4
	20	Negligible	40	800				
4	10	20%	160	1600	2240	192	14	11.7
	20	Negligible	32	640				
5	12	18%	160	1920	2500	189	15.7	13.2
	20	Negligible	29	580				

The second column of this table shows five different first power levels (with corresponding likelihood of message failure shown in column 3) and a fixed second power level with negligible failure probability (for clarity, also shown in column 3). An arbitrary message comprising 160

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frames has been selected per column 4 as an example of what is to be sent. First 160 frames are sent at the first power level and then the frames that did not go through are sent at the second power level. The two numbers of frames shown in column 4 are added to give the total number of frames sent, as shown in column 7. The power expended in column 5 is the number of frames transmitted multiplied by the power level in column 2. The total power per message in column 6 is the sum of the two power figures in column 5.

The table envisions two ways of calculating average power:

- average power per frame successfully transmitted (i.e. 160 frames, some at first power level and some at second),
- or the average power per message (160 frames plus extras for all the first level frames that did not get through).

These are shown, respectively, in the penultimate and final columns of the table. In both cases it can be seen that, even in the simple case assuming negligible failure rate at the fixed second power level, there is a value for the first power level that gives a lowest average power level. Note: the optimum first power level does not equate to the minimum first power level.

On page 3 of the latest action the Examiner states "the minimum transmission power level inherently corresponds to a maximum probability of failed transmission"; this is so, as the minimum possible power level is zero, corresponding to absolute certainty of failed transmission. It misses the point that in the claimed invention what is recited is the value of the first (and second) power level that gives the lowest average power, examples of which appear in the last 2 columns of the table. In the table, the lowest average power per successful frame is seen in example 3, with the lowest average per successful message seen in example 2. The

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Examiner's argument seems to suggest taking the minimum power level of example 1 of the table, but this is not what the claims recite, as it does not give the lowest average.

The Examiner again refers to Hamabe as teaching "to select transmission power in sequential steps from a minimum transmission power level up to a maximum transmission power level" and implies that adding this teaching to Flammer would yield the claimed invention. Referring again to the table, stepping up and down through the power levels would not provide a minimization of power (other than transitionally as the selected first power level passes through the optimum point prior to continuing to a less "economic" value).

Claims 18 & 30

The Examiner says that Fig. 5 of Flammer shows a plurality of re-transmissions. Applicant respectfully disagrees. Fig. 5 shows ONE re-transmission at Y. Then at V a new packet is sent. This fails to teach or suggest the claim limitation of transmitting further information units associated with the first and second information units as claimed.

Claim 20

This claim recites real-time aspects of the invention.

For these limitations, the Examiner cites Flammer 3, lines 35-53, which say

The target node controller 13 and source node controller 9 cooperate to minimize the source node transmitter power level. FIG. 2 is a flowchart illustrating the operation of the target node controller 13 according to one embodiment of the invention. The target node controller 13 monitors an analog received signal strength indication (rssi) from the target node receiver 12. For each successfully received packet, the target node controller 13 converts the analog rssi to a quantitative indicator of signal strength (Step A). The packet's signal strength is compared to a minimum

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previously recorded in target node controller memory 13A (Step B). If the packet's strength is lower, the recorded minimum is updated (Step C). The target node controller 13 then uses the target node transmitter 14 to send the source node 4 a zero value as an indicator of the difference between the power of the most recently received packet and the recorded minimum signal strength (Step D). If the packet's strength is higher than the previously recorded minimum, the target node controller 13 calculates the difference between the packet's strength and the previously recorded minimum (Step E). The target node controller 13 then sends this difference to the source node 4 as a quantitative difference indicator (Step F). The difference indicator also serves as an acknowledgement that the packet was successfully received.

Applicant finds nothing at all about this section that relates to real time data. What does the Examiner think does so? The Examiner also cites Figure 6, but Applicant finds nothing real time about this figure.

The Examiner also indicates that the term "real time" is not defined. Accordingly, Applicant submits herewith a copy of the definition of "real time" on the Internet dictionary called "Webopedia." Applicant respectfully submits that this is a clear and well-defined term.

The Examiner also cites certain alleged "common practice in the art," but fails to cite documentation supporting this alleged art. Accordingly, Applicant is unable to evaluate it to determine what the scope of such art is or whether it would be obvious to combine such art with the other art of record.

Applicant therefore respectfully submits that the Examiner has failed to present a *prima facie* case against claim 20.

Claim 31

Applicant is not sure, but supposes that paragraph h on pages 9-10 of the office action relates to claim 31. Is that right? If not, clarification is respectfully requested.

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Applicant respectfully submits that paragraph h is improper because it introduces another reference without actually rejecting the claim over that reference. Either the claim is rejected over this reference or not.

Moreover, Flammer & Hulyalkar are clearly alternatives as far as repetition of information is concerned. Applicant respectfully submits that the motivation to combine them comes from the Examiner, not from the references, and is impermissible hindsight in view of Applicants disclosure.

Claim 32

The Examiner now says that this claim is rejected for the same reason as given for claim 5. Applicant respectfully submits that this is improper. Claim 5 does not recite that the first and second are combined on reception to achieve recognition. Accordingly, Applicant respectfully submits that grouping them together is improper.

Claim 16 & 24-27

Applicant continues respectfully to traverse this rejection.

First, the Examiner adds a reference without making a formal rejection over it. Either the claim is rejected over this third reference or it is not. Applicant respectfully submits that the Examiner's technique of citing it in later remarks fails to constitute a proper rejection.

Second, Applicant respectfully disagrees that the '922 document is in the same field. It relates to some kind of obscure custom automotive related communication system. The Examiner takes forward error correction out of context from this obscure field to add it to the other rejections. Applicant respectfully submits that one of ordinary skill in the art would not do this.

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Third, the section of the '922 document cited apparently includes the FEC information in a first transmission, not in a second transmission relating to a first transmission.

Accordingly, Applicant respectfully submits that the Examiner has failed to make a prima facie case against these claims.

The Examiner's other rejections and/or points of argument not addressed would appear to be moot in view of the foregoing. Nevertheless, Applicant reserves the right to respond to those rejections and arguments and to advance additional arguments in the future.

Applicant respectfully submits that he has answered each issue raised by the Examiner and that the application is accordingly in condition for allowance. Allowance is therefore respectfully requested.

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Respectfully submitted,

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